

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: HOEHNE et al. Examiner: Unknown
 Serial No.: 10/531,146 Group Art Unit: Unknown
 Filed: April 12, 2005 Docket: 02316.2104USWO
 Title: DISTRIBUTOR SYSTEM AND METHOD FOR OPTICAL FIBERS

CERTIFICATE UNDER 37 CFR 1.8:

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail, with sufficient postage, in an envelope addressed to: Mail Stop PCT, Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450 on March 27, 2006.

By: 
 Name: Sarah Dannecker

Mail Stop PCT
 Commissioner for Patents
 P.O. Box 1450
 Alexandria, Virginia 22313-1450

23552

PATENT TRADEMARK OFFICE

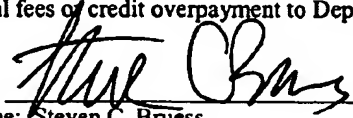
Commissioner:

We are transmitting herewith the attached:

- ☒ Transmittal Sheet in duplicate containing Certificate of Mailing
- ☒ To date, we have not received the Notification of Missing Requirements. We therefore do not enclose a copy thereof herewith.
- ☒ English translation of National Stage PCT Patent Application: Spec. 14 pgs; 10 claims; Abstract 0 pgs.
- ☒ Signed Combined Declaration and Power of Attorney
- ☒ Check(s) in the amount of \$130.00 for the Missing Requirements completion fee and \$130.00 for furnishing the English translation later than 30 months from the earliest claimed priority date (37 CFR 1.492(f))
- ☒ Other: Preliminary Amendment (5 pages), International Publication Page, Form PCT/ISA/210, Communication Regarding Missing Requirements, Communication Regarding English Translation of Application, Communication Regarding Requested Figure
- ☒ Return postcard

Please consider this a PETITION FOR EXTENSION OF TIME for a sufficient number of months to enter these papers or any future reply, if appropriate. Please charge any additional fees or credit overpayment to Deposit Account No. 13-2725. A duplicate of this sheet is enclosed.

Merchant & Gould P.C.
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By: 
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 Reg. No.: 34,130
 SCB/sbd

(PTO TRANSMITTAL - GENERAL)

S/N 10/531,146

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	HOEHNE et al.	Examiner:	Unknown
Serial No.:	10/531,146	Group Art Unit:	Unknown
Filed:	April 12, 2005	Docket No.:	02316.2104USWO
Title:	DISTRIBUTOR SYSTEM AND METHOD FOR OPTICAL FIBERS		

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I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail, with sufficient postage, in an envelope addressed to: Mail Stop PCT, Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 on March ~~22~~, 2006.

By: 

Name: Sarah Dannecker

COMMUNICATION REGARDING MISSING REQUIREMENTS

Mail Stop PCT
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

Dear Commissioner:

In connection with the above-identified application, enclosed please find the originally signed Combined Declaration and Power of Attorney. Also enclosed is our check in the amount of \$130.00 to cover the Missing Requirements completion fee. To date, we have not received the Notification of Missing Requirements. We therefore do not enclose a copy thereof herewith.

04/05/2006 NKAYPAGH 00000127 10531146

01 FC:1617

130.00 00

Respectfully submitted,

23552

PATENT TRADEMARK OFFICE

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Dated: March 21, 2006

By: 

Steven C. Bruess

Reg. No. 34,130

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S/N 10/531,146

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	HOEHNE et al.	Examiner:	Unknown
Serial No.:	10/531,146	Group Art Unit:	Unknown
Filed:	April 12, 2005	Docket No.:	02316.2104USWO
Title:	DISTRIBUTOR SYSTEM AND METHOD FOR OPTICAL FIBERS		

CERTIFICATE UNDER 37 CFR 1.8:

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail, with sufficient postage, in an envelope addressed to: Mail Stop PCT, Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 on March ~~22~~ 2006.

By: 

Name: Sarah Dannecker

COMMUNICATION REGARDING ENGLISH TRANSLATION OF APPLICATION

Mail Stop PCT
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Commissioner:

In connection with the above-identified application, it is noted that the application was initially filed on April 12, 2005, under serial no. 10/531,146, in the German language. We now enclose the English translation of the application, with the required fee of \$130.00 (37 C.F.R. 1.492(f)), to be filed in the United States Patent & Trademark Office.

4/05/2006 HKAYPAGH 00000127 10531146

2 FC:1618

130.00 OP

23552

PATENT TRADEMARK OFFICE

Respectfully submitted,

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By: 

Steven C. Bruess

Reg. No. 34,130

Dated: March 27, 2006

SCB/sbd

INTERNATIONAL PATENT COOPERATION TREATY

Sender: AUTHORITY COMMISSIONED WITH THE
INTERNATIONAL PRELIMINARY
EXAMINATION

PCT

NOTICE REG. THE TRANSMITTAL OF THE INTERNATIONAL PRELIMINARY EXAMINATION REPORT (Rule 71.1 PCT)

To:

KRONE GMBH
Beeskowdamm 3-11
D-14167 Berlin
ALLEMAGNE

Transmission date

(day/month/year)

07 Feb 2005

Reference number of the applicant or the attorney

02-008 PCT/868

IMPORTANT NOTICE

International reference number

PCT/EP 03/12119

International application date

(day/month/year) 31 Oct 2003

Priority date (day/month/year)

22 Nov 2002

Applicant

KRONE GMBH et al.

1. The applicant is notified that that the authority commissioned to perform the international preliminary examination hereby provides the international preliminary examination report created for the international application including all associated annexes if applicable.
2. A copy of the report as well as any applicable annexes will be transmitted to the international office for forwarding to all selected authorities.
3. If requested by the selected authority, the international office will prepare an English translation of the report (this does not apply to the annexes) and transmit it to the respective authority.

4. REMINDER

In order to enter the national phase, the applicant is required to perform specific actions (provision of translations, payment of national fees) for each selected authority within 30 months after the priority date (or later for some authorities) (Sec. 39 (1)) (also refer to the information transmitted by the international office in form PCT/IB/301).

If the transmission of a translation of the international application is required for a selected authority, this translation must also include translations of all annexes to the international preliminary examination report. The applicant is responsible for preparing such translations and directly submitting them to the selected authorities.

Additional details with regard to the applicable deadlines and requirements of the selected authorities are specified in volume II of the PCT guideline for applicants.

The applicant is referred to Sec. 33(5) which explains that the criteria for novelty, innovative activity, and commercial use that are detailed in sections 33(2) through (4) are only relevant for the international preliminary examination. "Every nation honoring the treaty (...) may define additional or deviating characteristics for deciding the suitability for patenting of the claimed invention in this nation" (also refer to Sec. 27(5)). Among others, such additional characteristics may relate to exceptions from the suitability for patenting, requirements with regard to the publication of the invention, and clarity as well as support of the claims.

Name and mailing address of the authority commissioned
with the international examination

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D-80298 Munich
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Authorized civil servant da

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**INTERNATIONAL PATENT COOPERATION
TREATY**
PCT
INTERNATIONAL PRELIMINARY EXAMINATION REPORT
(Sec. 36 and Rule 70 PCT)

Reference number of the applicant or the
attorney 02-008 PCT/868

**FURTHER
PROCEEDING**

Ref. notice reg. the transmittal of the international
preliminary examination report (form PCT/PEA/416)

International reference
number PCT/EP 03/12119

International application date (day/month/year)
31 Oct 2003

Priority date (day/month/year) 22 Nov
2002

International patent classification (IPC) or national classification and IPC
G02B8/44

Applicant
KRONE GMBH et al.

1. This international preliminary examination report has been prepared by the authority commissioned with the international preliminary examination and is transmitted to the applicant in accordance with Sec. 36.

2. This report contains a total of 8 sheets including this cover sheet.

X In addition, this report includes ANNEXES; in particular sheets with descriptions, claims and/or drawings that have been modified and form the basis for this report and/or sheets with corrections that have been performed by this authority (Ref. Rule 70.16 and Sec. 607 of the administrative guidelines for the PCT).

These annexes include a total of 2 sheets.

3. This report includes the following details:

- I X Basis of the notice
- II O Priority
- III O No preparation of an analysis with regard to novelty, innovative activity, and commercial use
- IV O Lack of uniformity of the invention
- V X Founded determination in accordance with Rule 66.2 a)ii) regarding the novelty, the innovative activity, and the commercial use; documents and explanations in support of this determination
- VI O Specific cited documents
- VII O Specific deficiencies of the international application
- VIII O Specific comments regarding the international application

Filing date of the application

24 Apr 2004

Completion date of this report

07 Feb 2005

Name and mailing address of the authority commissioned
with the international examination

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**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International reference number **PCT/EP 03/12119**

I. Basis of the Report

1. Regarding the components of the international application (*replacement sheets that have been provided to the application office upon request in accordance with Sec. 14 shall be considered as 'originally filed' in the context of this report and are not attached to the report because they do not contain modifications (Rules 70.16 and 70.17)*):

Description, pages

1-10 In the originally filed form

Claims, No.

1-10 Received with letter of 06 Jan 2005 on 12 Jan 2005

Drawings, sheets

1/4-4/4 In the originally filed form

2. Regarding the language: Subject to differing specifications in this section, all aforementioned components were available to or filed with the authority in the filing language of the international application.

The components were available to the authority in the following language: and/or were filed in this language; in particular:

- ☐ the language of the translation that has been provided for the purpose of international research (in accordance with Rule 23.1 (b)).
- ☐ the language of the publication of the international application (in accordance with Rule 48.3(b)).
- ☐ the language of the translation that has been provided for the purpose of international research (in accordance with Rule 55.2 and/or 55.3).

3. With regard to the nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination has been performed on the basis of the sequence protocol which:

- ☐ is contained in a written format in the international application.
- ☐ has been filed together with the international application in a machine-readable format.
- ☐ has subsequently been filed in a written format with the authority.
- ☐ has subsequently been filed in a machine-readable format with the authority.
- ☐ The declaration that the subsequently filed written sequence protocol does not exceed the disclosed contents of the international application at the time of the application has been provided.
- ☐ The declaration that the information recorded in a machine-readable format corresponds to the written sequence protocol has been provided.

4. Due to the modifications, the following documents have been left out:

- ☐ Description, pages:
- ☐ Claims, No.:
- ☐ Drawings, sheet:

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International reference number **PCT/EP 03/12119**

5. ☐ This report has been prepared without considering (some) of the modifications. This is due to the fact that the authority believes these to exceed the contents of the originally filed version of the disclosure for the specified reasons (Rule 70.2(c)).

(Replacement sheets containing such modifications should be specified in Sec. 1; they should be attached to this report.)

6. Any additional comments:

V. Founded determination regarding the novelty, the innovative activity, and the commercial use in accordance with Sec. 35(2); documents and explanations in support of this determination

1. Determination

Novelty (N)	Yes: Claims 1-10
	No: Claims
Innovative activity (IS)	Yes: Claims 1-10
	No: Claims
use (IA)	Yes: Claims: 1-10
	No: Claims:

2. Documents and explanations:

Ref. supplement

Reg. Section V

Please refer to the following documents:

D1: US 5 946 440
D2: DE 35 42 724
D3: WO 95 07477
D4: EP 0 550 327
D5: EP 0 715 196
D6: EP 0 501 336
D7: US 6 215 938

1. Subject to the limitations with regard to clarity as defined in Sec. 3, the object of claim 1 is considered to be a novelty that is based on an innovative activity (Sec. 33(2) and (3) PCT):
 - 1.1 Document D1 describes a mechanism for coupling optical fibers (figures 1, 7 -10, 27 - 33, 41 - 47, column 3, lines 25 - 38, column 4, lines 1 -6, column 5, lines 18 - column 8, line 55) comprising at least one module (i.e. housing 21) that exhibits at least one receiving device (i.e. the mechanism formed by means of the cable rails 120) suitable for receiving at least two cassettes (cassettes 170). One cassette exhibits at least one coupling element (e.g. refer to the figures). At least one buffered fiber is fixed at the module (e.g. refer to cable clamp 65). The buffered fiber can be divided into at least two strands comprising at least one optical fiber (otherwise it would not be strands after all ...). (All known buffered optical fibers can be divided ..., refer to the cable/optical fiber inputs 64 and 64a). A strand with excess length is received by a cassette (that is typically the idea and purpose of such cassettes in distribution cabinets and also the case in this application). At least one of the optical fibers can be connected to the coupling element (once again, refer to the figures). In addition, the cassette with the received strand can be connected to the receiving device in a non-permanent manner (Ref. column 6, lines 20 - 38 and column 8, lines 42 - 55). The receiving device exhibits a pivoting mechanism for the cassettes. The pivoting mechanism exhibits at least one spindle and a complementary groove in the cassette for receiving the spindle. In that context, the spindle is formed by means of a bolt of a fastening element. After releasing this

fastening element, the individual cassette may be removed by means of a movement that is lateral to the spindle from the module (after slight lifting).

The mechanism as described in D1 differs from the device as described in claim 1 insofar that the complementary groove for the bolt spindle is formed by a through hole rather than a laterally open "groove" (a laterally open slot).

Laterally open "grooves" (slots) that receive the bolt of a knurled screw and facilitate the lateral removal of cassettes from devices are generally known (e.g. ref. D2: figure 2 or also D6: figure 6).

Prior art also provides for the clip attachment of elastically deformable cassette component "slots" to a tilting spindle which also facilitates the direct lateral removal of individual cassettes (Ref. D5: figure 2).

On the other hand, prior art also states that a cassette that can be tilted around a spindle should ideally not be released due to solely being tilted away from its module as this may result in unintended releases and "drops" of cassettes from their module/tilting spindle. For that reason, the state of the art regularly provides for a safety mechanism preventing such unintended releases of the cassette from its tilting spindle due to sole tilting (i.e. the clip attachment or a through hole).

For that reason, the laterally open "groove" attachment ("slot attachment") as defined in claim 1 is not considered to suggest itself (i.e. the conventional state of the art does not point at such a solution).

- 1.2 Documents D2 - D7 also describe a mechanism for coupling optical fibers (D2: figures 1, 2, and 5, column 3, line 2 - column 6, line 41; D3: figures 1-14; page 6, line 35 - page 8, line 20, page 9, line 30 - page 10, line 13, page 13, lines 9-15, page 15, line 34 - page 16, line 28, D4: figures 1-8, column 3, line 50 - column 7, line 10, D5: figures 1-7, column 2, line 28 - column 3, line 55, D6: figures 1-12, column 3, line 7 - column 5, line 53, D7: figures 1 - 7, column 2, line 33 - column 5, line 32) comprising at least one module exhibiting at least

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SUPPLEMENT**

International reference number PCT/EP 03/12119

one receiving device (D2: connection sets AG1, AG2, AG3 with swivel arms; D3: a housing formed from the panels 5a, 5b, 5c, 6, 7, 8, D4: a cabinet 23 with housing components 22, 23, 9a, and 9b, D5: a frame 11 and a housing component 3, a spindle 12 etc., D6: a housing 4 and a cassette holder 3, D7: a cabinet

10 with guides 22) suitable for receiving two or more cassettes (D2: cassette magazines CM1 - CM3, D3: cassettes 4 and 45, D4: cassettes / cards 10, D5: cassettes 21, 22, 23, D6: cassettes K1 - K4, D7: cassettes 31 and 31').

One cassette exhibits at least one coupling element

(D2: column 4, lines 18-25; D3: page 8, lines 35 - 37, D4: plug 16, D5: splices 5, D6: column 4, lines 28 - 35, D7: column 3, lines 43 - 47).

At least one buffered fiber can be fixed on the module (D2: by means of the stops and clamps AK11- AK32 and AKE; D3: e.g. by means of the cable holder plates 6 and 7 or the base plate 3, D4: by means of the guides 21, D5: a core 36 and/or the hose holders 37 and the hoses 8, D6: cable holders 7, D7: cable holders 26).

The buffered fiber can be divided into at least two strands comprising at least one optical fiber (otherwise it would not be strands after all ...). (All known buffered optical fibers can be divided ..., even here, ref. D2: column 3, lines 6 - 16, D3: ref. figures 10 and 12, D4: ref. figure 7, D5: ref. figure 5, D6: ref. figures 2 and 3, D7: ref. column 3, lines 50 - 54). A strand of excess length can be received by a cassette (that is typically the idea and the purpose of such cassettes in distribution cabinets, ref. D2: implicitly disclosed

for the specialist, D3: ref. arbor 12, D4: ref. arbors 20, D5: ref. arbor 29, D6: column 4, lines 28 - 35, D7: arbor 34). The one or more optical fibers can be connected to a coupling element (D2: column 4, lines 18-25; D3: page 8, lines 35 - 37, D4: column 6, lines 13 - 18, D5: ref. splices 5, D6: column 4, lines 28 - 35, D7: column 3, lines 43 - 47). In addition, the cassette with the received strand is connected to the receiving device in a non-permanent manner (D2: column 3, lines 43 - 51; D3: page 13, lines 9-15, D4: column 6, lines 13 - 31, D5: ref. locking element 24, D6: column 4, lines 2 - 27, D7: ref. figure 1).

However, they either do not exhibit a tilting spindle from the very beginning (D2, D4, D6, and D7) or do not exhibit a tilting spindle cassette connection similar to the one as described in claim 1. Due to the reasons already specified with regard to D1, it is not considered obvious for a specialist to introduce the tilting spindle/cassette connection as defined in claim 1 or replace existing tilting spindle/cassette connections with such a

design.

- 1.3 Claims 2-9 also depend on claim 1 and consequently fulfill the PCT requirements with regard to novelty and innovative activity.
2. Methods that include the removal of cassettes with optical fibers, buffered fiber reserves, and optical fiber couplers from their receiving devices, the transport of the cassettes to a workplace while releasing the excess length contained in the cassette, and coupling an optical fiber to another optical fiber characterized by the fact that the cassette is fixed in the receiving mechanism after completing the coupling are generally known.

However, the mechanisms for coupling the optical fibers do not correspond to the devices in accordance with claims 1-9.

Due to the reasons as specified in section 1, the method detailed in claim 10 is considered to be a novelty based on an innovative activity.

3. For reasons of completeness, it should be mentioned at this time that the application also does not fulfill the requirements of Sec. 6 PCT:
 - 3.1 i) The term "groove" in claim 1 does not indicate that – contrary to the conventional meaning of this term – it refers to a slot that is open to one side (as clearly visible in the figures) rather than a simple fin, groove, or recess. For that reason, claim 1 is generally not clear as well as not clear with regard to the description:

ii) In addition, the description clearly indicates that each cassette exhibits a separate tilting spindle that is formed by the bolt of a knurled screw. This also allows for firmly retaining the cassettes in a position of the knurled screw (i.e. tightened) in the receiving device, tilting the cassette around the bolt of the knurled screw in a second position (i.e. loosened screw), and retrieving the cassette with a movement lateral to the bolt spindle from the receiving device.

No other possibilities for attaching the cassette in a non-permanent manner in the receiving device are being described; in addition, no other tilting spindle

is being disclosed. For that reason, the characteristic that the tilting spindle which is received by the "groove" is formed by the bolt of a knurled screw for each cassette must be considered to be an essential element for the definition of the invention. Claim 1 does not contain this characteristic and consequently does also not fulfill the PCT requirements specifying the need for an independent claim to exhibit all characteristics that are essential for defining the invention.

- 3.2 In claims 3 and 4, it is unclear which structural characteristics of the device are supposed to be defined by specifying the number of circuits that are available for 'assigning' optical fibers, i.e. claims 3 and 4 are unclear as to whether the circuits are a part of the claimed object or not. In addition, the meaning of the term "circuit" is unclear. However, a possible interpretation of this term is provided by the description (page 1, lines 31 - 33): a "circuit" is simply the sum of all optical fibers, splices etc. that are present within a cassette.
- 3.3 Claim 10 is unclear as to whether the spindle of the knurled screw simply forms the tilting spindle of the cassette.

Patent Claims

1. A mechanism for coupling optical fibers, comprising at least one module (1, 1') which exhibits at least one receiving device (3, 3') suitable for receiving two or more cassettes (2, 2'). One cassette (2, 2') exhibits at least one coupling element (26). At least one buffered fiber is affixed to the module (1, 1'). The buffered fiber is divided into at least two strands comprising at least one optical fiber.
A strand with excess length is received by a cassette (2, 2'), the at least one optical fiber is connected to the coupling element (26).
The cassette (2, 2') is connected by means of the received strand in a non-permanent manner to the receiving device (3, 3').
The receiving device (3, 3') exhibits a pivoting mechanism for the cassettes which is characterized by the fact that
The pivoting mechanism exhibits at least one spindle (34) and the cassette (2, 2') exhibits a complementary groove (27) suitable for receiving the spindle (34).
Each individual cassette may be removed from the module by means of a movement lateral to the spindle (34).
2. The device as claimed in claim 1, wherein the cassette (2, 2') is formed with at least one guide element (22, 23, 24), the guide element (22, 23, 24) defining at least one path for receiving at least one strand and a minimum radius of curvature of the path being greater than a minimum-permissible bending radius of the strand.
3. The device as claimed in claim 1 or 2, wherein the optical fibers of a strand can be assigned to a circuit or circuits dependent on one another.

MODIFIED SHEET

4. The device as claimed in claim 3, wherein the cassettes (2, 2') are formed as single-fiber cassettes, to which a circuit can be assigned.
5. The device as claimed in one of the said claims, wherein the coupling element (26) of the cassette (2') can be connected to an optical fiber element (5) which is formed with a plug-in contact (52), at least at an end remote from the coupling element (26), it being possible by means of the coupling element to connect the optical fiber element (5) to at least one optical fiber of the strand.
6. The device as claimed in one of the said claims, wherein the coupling element (26) is formed as a splicing element.
7. The device as claimed in one of the said claims, wherein the receiving device (3, 3') comprises at least one guide rail (31, 31'), which can be firmly connected to the module (1, 1').
8. The device as claimed in one of the said claims, wherein the receiving device (3') comprises a knurled screw (36).
9. The device as claimed in one of the said claims, wherein the cassette is formed with a receiving element (21), by which at least one optical fiber with a fiber protection can be received.
10. A method for coupling optical fibers by means of the device as claimed in one of the preceding claims, wherein a cassette (2, 2') is released and removed from the receiving device (3, 3'), the cassette is transported to a workplace, with the excess length being unwound, a coupling of the optical fiber assigned to the cassette with another optical fiber is established and the cassette is subsequently fixed again in the receiving device.

(12) INTERNATIONAL APPLICATION PUBLISHED IN ACCORDANCE WITH THE INTERNATIONAL
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(19) World Intellectual Property Organization
International Office



(43) International publication date 10 June
2004 (10.06.2004)

PCT

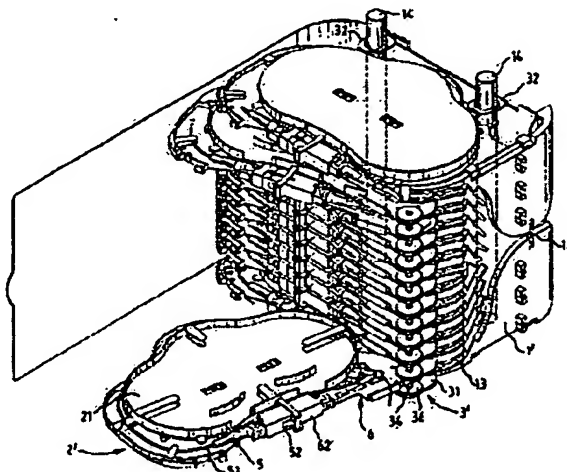
(10) International publication number
WO 2004/049029 A1

- (51) International patent classification: **G02B 6/44** (72) Inventor; and
(75) Inventor/applicant (only for the US): **HOEHNE,**
(21) International reference No.: **PCT/EP2003/012119** **Elke**
[DE/DE]; Nelkenweg 6, 14532 Stahnsdorf (DE). **KLEIN,**
(22) International application date: **31. October 2003 (31.10.2003)** **Klaus** [DE/DE]; Neudecker Weg 99, 12354 Berlin (DE).
LAURISCH, Steffen [DE/DE]; Wassermannstrasse 111,
12489 Berlin (DE).
(25) Application language: **German**
(26) Publication language: **German** (74) Joint representative: **KRONE GMBH; Beeskowdamm**
3-11, 14167 Berlin (DE).
(30) Details reg. priority: **102 55 561.3 22 November 2002 (22.11.2002) DE** (81) Designated countries (national): **AE, AG, AL, AM, AT,**
AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,
MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH,
(71) Applicant (for all designated countries except the US):
KRONE GMBH [DE/DE]; Beeskowdamm 3-11, 14167
Berlin (DE).

(54) Title: **DISTRIBUTOR SYSTEM AND METHOD FOR FIBRE OPTIC CABLES (54)**

Bezeichnung: **VERTEILERSYSTEM FÜR OPTISCHE FASERN UND VERFAHREN**

[Continued on the next page]



(57) Abstract: The invention relates to a method and a device for coupling optical fibers, comprising at least one module (1, 1'), which is formed by at least one receiving device (3, 3') for receiving at least two cassettes (2, 2'), a cassette (2, 2') being formed with at least one coupling element (26), at least one buffered fiber being able to be fixed on the module (1, 1'), it being possible for the buffered fiber to be subdivided into at least two strands, comprising at least one optical fiber, a cassette (2, 2') being able to receive a strand with excess length, the at least one optical fiber being able to be connected to the coupling element (26), and the cassette (2, 2') with the received strand being releasably connected to the receiving device (3, 3').

(57) Zusammenfassung: Die Erfindung betrifft ein Verfahren und eine Vorrichtung zur Kopplung von Lichtwellenleitern, umfassend mindestens ein Modul (1, 1'), welches mit mindestens einer Aufnahmeeinrichtung (3, 3') zur Aufnahmen von mindestens zwei Kassetten (2, 2') ausgebildet ist,

[Continued on the next page]

WO 2004/049029 A1



WO 2004/049029 A1

PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN,
TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD,
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Published:

— with international research report

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For an explanation of the two letter codes and the other abbreviations, please refer to the explanations ("Guidance Notes on Codes and Abbreviations") at the beginning of each regular edition of the PCT Gazette.

wobei eine Kassette (2, 2') mit mindestens einem Kopplungselement (26) ausgebildet ist, mindestens eine Bündelader an dem Modul (1, 1') fixierbar ist, wobei die Bündelader in mindestens zwei Stränge, umfassend mindestens einen Lichtwellenleiter, unterteilbar ist, ein Strang mit Überlänge von einer Kassette (2, 2') aufnehmbar ist, wobei der mindestens eine Lichtwellenleiter mit dem Kopplungselement (26) verbindbar ist, und die Kassette (2, 2') mit aufgenommenem Strang mit der Aufnahmeeinrichtung (3, 3') lösbar verbunden ist.